

Bill of Materials

TI DESIGNS

TIDM-AUTO-DC-LED-LIGHTING

Item	Qty	Reference	Value	Part Description	Manufacturer	Manufacturer Part Number	Alternate Part	PCB Footprint	Note
1	12	C1, C2, C7, C8, C12, C13, C17, C18, C23, C24, C28, C29	100u/25V	Capacitor	Panasonic	UUB1E101MNL		CAP_ECEVS_E8*8	
2	1	C3	10uF/25v	Capacitor	Common Supplier			C/0603	
3	4	C4, C20, C31, C36	100u/25V	Capacitor	Panasonic	UUB1E101MNL		CAP_ECEVS_G	
4	1	C5	1u/25v	Capacitor	Common Supplier			C/0805/SMT1	
5	3	C6, C15, C22	1u/16v	Capacitor	Common Supplier			C/0603	
6	5	C9, C14, C19, C25, C30	10u/25v	Capacitor	Common Supplier			C/0603	
7	2	C10, C26	1u/16V	Capacitor	Common Supplier			C/0805/SMT1	
8	2	C11, C27	0.47u/25v	Capacitor	Common Supplier			C/0805/SMT1	
9	1	C21	105/25v	Capacitor	Common Supplier			C/0805/SMT1	
10	6	C32, C33, C34, C39, C40, C41	10u/25v	Capacitor	Common Supplier			C/0805/SMT1	
11	1	C35	0.22u/50v	Capacitor	Common Supplier			C/0805/SMT1	
12	1	C37	1uF	Capacitor	Common Supplier			C/0603	
13	2	C38, C48	220u/10V	Capacitor	Panasonic	UUB1A221MNL		CAP_ECEVS_G	
14	1	C42	4.7u/16v	Capacitor	Common Supplier			C/0805/SMT1	
15	1	C43	0.01u/25v	Capacitor	Common Supplier			C/0603	
16	2	C44, C45	0.1u/16v	Capacitor	Common Supplier			C/0603	
17	1	C46	100u/16V	Capacitor	Panasonic	UCJ1C101MCL		CAP_ECEVS_G	
18	7	C47, C68, C82, C96, C103, C105, C115	1u	Capacitor	Common Supplier			C/0603	
19	2	C49, C50	10u	Capacitor	Common Supplier			C/0805/SMT1	
20	3	C51, C53, C116	220p	Capacitor	Common Supplier			C/0603	
21	1	C52	1500P/100v	Capacitor	Common Supplier			C/0805/SMT1	
22	1	C54	100P	Capacitor	Common Supplier			C/0603	
23	27	C55, C59, C61, C62, C63, C64, C65, C66, C69, C71, C73, C74	1n	Capacitor	Common Supplier			C/0603	
24	6	C57, C78, C79, C87, C92, C93	100pF	Capacitor	Common Supplier			C/0603	
25	6	C67, C102, C106, C107, C109, C113	0.1u	Capacitor	Common Supplier			C/0603	
26	2	C98, C99	15p	Capacitor	Common Supplier			C/0603	
27	6	C100, C101, C104, C108, C111, C112	2.2u	Capacitor	Common Supplier			C/0603	
28	2	C110, C114	0.1uF	Capacitor	Common Supplier			C/0603	
29	1	C117	2.2n	Capacitor	Common Supplier			C/0603	
30	1	CN1	8 pin	Signal Connector	Common Supplier			CN8P/3.96	
31	1	CN7	2 pin	Power Connector	MOLEX	42820-22		CN-2PIN-MOLEX	
32	1	CN8	8 pin	Power Connector	MOLEX	HDR1X8		HDR1X8	
33	6	D2, D6, D8, D11, D15, D17	MURS105T3G	Schottky Diode	VISHAY	MURS105T3G		D-SMB	
34	10	D3, D4, D5, D7, D9, D12, D13, D14, D16, D18	4148	Diode	VISHAY	L4148		D1206	
35	2	D19, D20	MBR0530	Schottky Diode	VISHAY	MBR0530		SOD-123	
36	1	D21	BAS16	Diode	FAIRCHILD	BAS16		SOT23-3P	
37	12	D22, D23, D24, D26, D27, D29, D30, D31, D32, D33, D34	BAT43S	Diode	FAIRCHILD	BAT43S		SOT23-3P	
38	1	JTAG1	14 pin	Signal Connector	Common Supplier			JTAG	
39	6	L1, L3, L4, L5, L7, L8	394.359uH	Inductor	Specified	NPS050060-126		L-C14D	
40	2	L2, L6	13.248uH	Inductor	Specified	NPS065060-20		L-C18D	
41	2	L9, L10	220FB	Ferrite Bead	Common Supplier			R/0805/SMT1	
42	2	L11, L13	220FB	Ferrite Bead	Common Supplier			R/0805/SMT1	
43	1	L12	2000K Ohm	Common Mode Inductor	TDK	ZIYS81R5-2PL-51T-G01		Inductor-ZIYS81R5	
44	1	L14	220 FB	Ferrite Bead	Common Supplier			R/0805/SMT1	

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45	3	LED1, LED2, LED3	White		Common Supplier			LED0805	
46	2	LED4, LED5	Blue		Common Supplier			LED0805	
47	4	Q1, Q3, Q6, Q8	30A/20V	Power MOSFET	Infineon	IPD30N06S2-23		TO-252AA	
48	6	Q2, Q4, Q5, Q7, Q9, Q10	50A/20V	Power MOSFET	Infineon	IPD50N04S3-09		TO-252AA	
49	1	Q11	24A/200V	Rectifier	IR	AUIRFR4620(24A/200V)		TO-252AA	
50	1	Q12	500mA/80V	NPN General-Purpose Amplifier	FAIRCHILD	SMBTA06 / MMBTA06		SOT23-3P	
51	1	Q13	1A/60V	NPN Silicon AF Transistors	Infineon	BCX 55-16 E6327		SOT89-MPT3	
52	1	Q14	25A/60V	Power MOSFET	Infineon	IPD25N06S4L-30		TO-252AA	
53	14	R1, R5, R13, R15, R16, R19, R23, R27, R36, R37, R83, R84	100	SMT Resistor	Common Supplier			R/0603	
54	11	R2, R3, R9, R11, R17, R24, R25, R31, R33, R38, R62	10	SMT Resistor	Common Supplier			R/0805/SMT1	
55	38	R4, R6, R8, R12, R20, R26, R28, R30, R34, R39, R45, R46	10K	SMT Resistor	Common Supplier			R/0603	
56	6	R7, R14, R21, R29, R35, R40	0.2/0.25W	Current Sensing Resistor	KOA Speer	SR732ATTDR200F		R/0805/SMT1	
57	1	R41	20K	SMT Resistor	Common Supplier			R/0603	
58	1	R42	3K	SMT Resistor	Common Supplier			R/0603	
59	1	R43	0	SMT Resistor	Common Supplier			R/0805/SMT1	
60	1	R44	24.9K	SMT Resistor	Common Supplier			R/0805/SMT1	
61	1	R47	270	SMT Resistor	Common Supplier			R/0805/SMT1	
62	1	R48	20K	SMT Resistor	Common Supplier			R/0805/SMT1	
63	1	R49	2	SMT Resistor	Common Supplier			R/0805/SMT1	
64	1	R50	15.15K	SMT Resistor	Common Supplier			R/0603	
65	1	R51	22	SMT Resistor	Common Supplier			R/0805/SMT1	
66	6	R52, R53, R57, R58, R59, R63	10K	SMT Resistor	Common Supplier			R/0603	
67	1	R55	3.3K	SMT Resistor	Common Supplier			R/0805/SMT1	
68	1	R60	100K	SMT Resistor	Common Supplier			R/0805/SMT1	
69	1	R61	10K	SMT Resistor	Common Supplier			R/0805/SMT1	
70	2	R65, R159	1K	SMT Resistor	Common Supplier			R/0603	
71	2	R66, R67	10	SMT Resistor	Common Supplier			R/1206B	
72	1	R68	0	SMT Resistor	Common Supplier			R/0603	
73	22	R69, R77, R81, R85, R87, R93, R97, R100, R101, R108, R109	10K_1%	SMT Resistor	Common Supplier			R/0603	
74	22	R71, R75, R79, R80, R82, R86, R88, R89, R91, R99, R102	1K_1%	SMT Resistor	Common Supplier			R/0603	
75	6	R73, R104, R105, R115, R124, R125	10	SMT Resistor	Common Supplier			R/0603	
76	1	R130	NC	SMT Resistor	Common Supplier			R/0603	
77	1	R139	470	SMT Resistor	Common Supplier			R/0603	
78	2	R150, R151	120	SMT Resistor	Common Supplier			R/0603	
79	1	R161	30K	SMT Resistor	Common Supplier			R/0603	
80	1	S1	SW-PB	Push Button	Common Supplier			SW-4P	
81	1	TP	VS1	Test Point	Common Supplier			TP1	
82	8	TP2, TP6, TP7, TP11, TP12, TP19, TP20, TP21		Test Point	Common Supplier			TP1	
83	1	TP8	IB2	Test Point	Common Supplier			TP1	
84	1	TP9	VB2	Test Point	Common Supplier			TP1	
85	5	TP10, TP26, TP28, TP29, TP34		Test Point	Common Supplier			TP1	
86	1	TP13	DRIVE2A	Test Point	Common Supplier			TP1	
87	1	TP14	IB1	Test Point	Common Supplier			TP1	
88	1	TP15	3V3	Test Point	Common Supplier			TP1	
89	1	TP16	12V	Test Point	Common Supplier			TP1	
90	1	TP17	5V	Test Point	Common Supplier			TP1	
91	1	TP18	DRIVE1B	Test Point	Common Supplier			TP1	
92	1	TP23	VBAT	Test Point	Common Supplier			TP1	
93	1	TP24	TEM	Test Point	Common Supplier			TP1	
94	1	TP27	REF	Test Point	Common Supplier			TP1	
95	1	TP30	LED_SET	Test Point	Common Supplier			TP1	
96	1	TP31	ILED2	Test Point	Common Supplier			TP1	
97	1	TP32	ILED3	Test Point	Common Supplier			TP1	
98	1	TP33	ILED1	Test Point	Common Supplier			TP1	
99	3	U1, U3, U5	LM5111	Gate Driver	Texas Instruments	LM5111		SO-G8/E2.5	

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100	2	U2, U6	UCC27201DDA	High-Side/Low-Side Driver	Texas Instruments	UCC27201DDA		SOP8-P	
101	1	U7		Transformer	Specified			Trans-12x12-8pin-SMD	
102	1	U8	UCC2813QDR-3Q1	Current Mode PWM	Texas Instruments	UCC2813QDR-3Q1		SO-G8/E2.5	
103	1	U9	TL431BQDBZR	Adjustable Precision Shunt Regulator	Texas Instruments			SOT23-3P	
104	3	U10, U11, U12	OPA4322AIPWR	Operation Amplifier	Texas Instruments			IC-TSOP14-PW	
105	1	U13	HVDA541QDRQ1	CAN Transceiver	Texas Instruments			SO-G8/E2.5	
106	1	U14	TMS320F28032PAG	MCU	Texas Instruments			IC-LQFP64-PM-PAG	
107	1	U15	TPIC1021AQDR	LIN Transceiver	Texas Instruments			SO-G8/E2.5	
108	1	X1	10M	Crystal Resonator	Common Supplier			XTAL-5*3SMT	
109	1	ZD1	13v/0.5w	TVS Diode	Common Supplier			D/1206/SMT	
110	1	ZD2	1KSMB47A	TVS Diode	Littelfuse	1KSMB47A		D-SMB	
111	1	ZD3	16v/0.5w	TVS Diode	Common Supplier			D/1206/SMT	
112	2	ZD4, ZD5	5.6v/0.5w	TVS Diode	Common Supplier			D/1206/SMT	

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